Abstract

A digital signal transceiver includes a frequency modulator for outputting a high-frequency signal frequency-modulated with a digital signal input thereto, a power amplifier for receiving a signal output from the frequency modulator, an antenna terminal arranged to be connected to an antenna, and an antenna switch. The antenna switch includes a first branch port for receiving a signal output from the power amplifier, a common port connected to the antenna terminal, said common port being connected to the first branch port in the transmitting mode, and a second branch port connected to the common port in the receiving mode. The transceiver further includes a filter having an input port thereof connected to the second branch port of the antenna switch, a high-frequency amplifier having an input port thereof connected to an output port of the filter, and a mixer for mixing a signal output from the high-frequency amplifier with the signal output from the frequency modulator to output a signal including the signal from the high-frequency amplifier and the signal from the frequency modulator. The frequency modulator outputs a high-frequency signal containing a phase noise in a transmitting mode different in level from a phase noise in a high-frequency signal in a receiving mode. The high-frequency signal in the receiving mode is not modulated. The digital signal transceiver includes the single frequency modulator commonly used in a transmitting mode and in a receiving mode, hence including a reduced number of components and having a high performance for receiving signals.